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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,861	05/29/2001	Satoshi Inoue	9319T-000219	4497

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EXAMINER

LIANG, REGINA

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 10/24/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/866,861

Applicant(s)

INOUE, SATOSHI

Examiner

Regina Liang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8,23-27 and 30-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8,23-27 and 30-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

2. Claim 37-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 37 is vague and indefinite since it is a method claim and depends on an apparatus claim 32.

Claim Rejections - 35 USC § 102

3. Claims 1, 2, 23, 25, 27, 30, 31, 33, 34, 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Gates et al (US. PAT. NO. 6,531,997 hereinafter Gates).

As to claims 1, 23, 30, 33, 36, Figs. 1A-1D, 3A-3F of Gates discloses a display device having display states which are prescribed by distribution states of particles (50), the display device comprising a driving circuit applying a first electric field to the particles for changing the distribution state thereof into a certain state (e.g., Fig. 1B or 3B), and applying a second electric field to the particle for maintaining or stabilizing the certain state as claimed (see col. 2, lines 36-38, and col. 18, lines 12-22 for example).

As to claims 2, 25, 31, 34, Gates teaches the particles (50) are contained in a microcapsule (20) together with a liquid (25) for dispersing the particles.

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As to claim 27, Gates teaches the particles are formed of a plurality of charged particles with differing quantities of electric charge (Fig. 1A, black and positive particles 50, white and negative particles 50').

Claim Rejections - 35 USC § 103

4. Claims 3-8, 24, 32, 35, 37, 38, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gates in view of Turner et al (US. PAT. NO. 6,480,182 hereinafter Turner).

As to claims 3, 4, 32, 35, 39, Gates does not disclose the display device comprising a plurality of scanning electrodes and data electrodes for independently applying the electric field to the particles in pixel units. However, Fig. 1 of Turner teaches the display device comprising a plurality of scanning electrodes and data electrodes for independently applying the electric field to the particles in pixel units. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display device of Gates to have the plurality of scanning electrodes and data electrodes for independently applying the electric field to the particles in pixel units as taught by Turner since the scanning electrodes and the data electrodes arranged in an intersecting pattern to allow specific elements or regions of the display material to be addressed.

As to claim 5, Turner teaches a switching element is disposed in correspondence to the intersection of the plurality of scanning lines and the data lines.

As to claims 6-8, Turner teaches the switching element comprises a thin film transistor or a two-terminal nonlinear element (col. 1, lines 43-62).

As to claim 24, see col. 4, line 65 to col. 5, line 31 of Turner.

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As to claim 37, the delay time as shown in Fig. 3F reads on a certain period of time passes as claimed.

As to claim 38, Gates teaches the particles (50) are contained in a microcapsule (20) together with a liquid (25) for dispersing the particles.

5. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gates and Turner as applied to claim 24 above, and further in view of Okamoto (US. PAT. NO. 6,094,184).

Gates as modified by Turner does not disclose a pixel is structured of a plurality of sub pixels, and gradation is controlled by pulse-surface-area modulation. However, Okamoto teaches it is well known in the art that a matrix display comprising a plurality of pixels each pixel can be structured of a plurality of sub-pixels, and the gradation is controlled by pulse-width modulation (col. 3, lines 1-5, col. 4, lines 32-33). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display of Turner to have the sub-pixels and the gradation as taught by Okamoto so as to provide a driving control for a matrix display which are capable of stable display of intermediate shades.

Response to Arguments

6. Applicant's arguments with respect to claims 1-8, 23-27, 30-39 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

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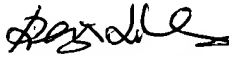
7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (703) 305-4719. The examiner can normally be reached on Monday-Friday from 9AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


REGINA LIANG
PRIMARY EXAMINER
ART UNIT 2674

RL
10/16/03